

Appl. No. 09/601,004
Amdt. dated October 27, 2003
Reply to Office action of April 25, 2003

In the Specification:

Page 2, lines 7-10 please amend the paragraph as follows:

a1 FIG. 8 is an explanatory diagram of data interpolation by using the sampling function shown in FIG. 7. As shown in FIG. 10 8, values except each sample point are interpolated by using all the sample values.

Page 20 please amend the abstract by deleting it and replacing it as follows:

a2 A two variable data interpolating decreases operating quantity and produces few errors. A data processor comprises a discrete value extracting section for interpolating between pieces of discrete data arranged at predetermined intervals on a two dimensional space, a sampling function operating section, and a convolution operating section. The discrete value extracting section extracts discrete data in a predetermined range around the point concerned. The sampling function operating section calculates, when the point position is specified, the value of the interpolating position based on the distance between the point and the discrete data by using a sampling function of local support differentiable only once over the region. The convolution operating section multiplies the calculated values by the values

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a2 of the discrete data, adds up the products, thus performing
convolution operation and outputting the interpolation value.
